

American Scientist Annual Index, Volume 81, 1993

Articles

Ahearne, John F., *The Future of Nuclear Power*, Jan., 24

Amábile-Cuevas, Carlos F., and Marina E. Chicurel, *Horizontal Gene Transfer*, Jul., 332

Alaya, Francisco J., and Bert Black, *Science and the Courts*, May, 230

Ayres, Robert U., and Duane C. Butcher, *The Flexible Factory Revisited*, Sept., 448

Ball, Donald M., Jeffrey F. Pedersen and Garry D. Lacefield, *The Tall-Fescue Endophyte*, Jul., 370

Brams, Steven J., *Theory of Moves*, Nov., 562

Burney, David A., *Recent Animal Extinctions: Recipes for Disaster*, Nov., 530

Chung, Fan, and Shlomo Sternberg, *Mathematics and the Buckyball*, Jan., 56

Cronk, Lee, *Parental Favoritism toward Daughters*, May, 272

Davis, Robert E., and Robert Dolan, *Nor'easters*, Sept., 428

Fleming, Theodore H., *Plant-Visiting Bats*, Sept., 460

Gauch, Hugh G., *Prediction, Parsimony and Noise*, Sept., 468

Guengerich, F. Peter, *Cytochrome P450 Enzymes*, Sept., 440

Herbst, Jan F., *Permanent Magnets*, May, 252

Josephson, Paul R., *The Crisis in Russian Physics*, Nov., 571

Kleinschmidt, Traute, and Thomas Gorr, *Evolutionary Relationships of the Coelacanth*, Jan., 72

Kniffen, Donald A., *The Gamma-Ray Universe*, Jul., 342

Larson, Douglas W., *The Recovery of Spirit Lake*, Mar., 166

MacPhee, Donald G., *Directed Evolution Reconsidered*, Nov., 554

Murr, Lawrence E., and William H. Kinard, *Effects of Low Earth Orbit*, Mar., 152

Myers, Judith H., *Population Outbreaks in Forest Lepidoptera*, May, 240

Nicol, Stephen, and William de la Mare, *Ecosystem Management and the Antarctic Krill*, Jan., 36

Pashler, Hal, *Doing Two Things at the Same Time*, Jan., 48

Pringle, Catherine, George Vellidis, Francis Heliotis, Dan Bandacu and Sergiu Cristofor, *Environmental Problems of the Danube Delta*, Jul., 350

Richardson, Philip L., *Tracking Ocean Eddies*, May, 261

Sigmon, Becky A., *Physical Anthropology in Socialist Europe*, Mar., 130

Swazey, Judith P., Melissa S. Anderson and Karen Seashore Lewis, *Ethical Problems in Academic Research*, Nov., 542

Wayne, Randy, *Excitability in Plant Cells*, Mar., 140

Zweibel, Ken, *Thin-Film Photovoltaic Cells*, Jul., 362

Departments

Computing Science: Hayes, Brian, *Balanced on a Pencil Point*, Nov., 510

Engineering: Petroski, Henry, *Engineers as Writers*, Sept., 419

Engineering: Petroski, Henry, *The Ferris Wheel*, May, 216

Engineering: Petroski, Henry, *Hoover Dam*, Nov., 517

Engineering: Petroski, Henry, *On Dating Inventions*, Jul., 314

Engineering: Petroski, Henry, *The Panama Canal*, Jan., 13

Engineering: Petroski, Henry, *Predicting Disaster*, Mar., 110

Marginalia: Fernie, J. Donald, *The Great Moon Hoax*, Mar., 120

Marginalia: Fernie, J. Donald, *The Tunguska Event*, Sept., 412

Marginalia: Hoffmann, Roald, *For the First Time You Can See Atoms*, Jan., 11

Marginalia: Hoffmann, Roald, *Of What Use Enediyne?*, Jul., 324

Marginalia: Thomson, Keith S., *Bird-Watchers Watched*, May, 222

Marginalia: Thomson, Keith S., *Northern Exposures*, Nov., 522

The Science of Computing: Denning, Dorothy E., *The Clipper Encryption System*, Jul., 319

The Science of Computing: Denning, Peter J., *Computational Grids*, May 212

The Science of Computing: Denning, Peter J., *An End and a Beginning*, Sept., 416

The Science of Computing: Denning, Peter J., *RISC Architecture*, Jan., 7

The Science of Computing: Hayes, Brian, *The Wheel of Fortune*, Mar., 114

Sigma Xi, The Scientific Research Society
National Lecturers 1994-95, Nov., 603

Statement of Ownership

Statement of ownership, management and circulation (required by 39 U.S.C. 3685). 1A. Title of Publication: American Scientist. 1B. Publication number: 0023-240. 2. Date of filing: September 30, 1993. 3. Frequency of issue: Bimonthly. 3A. No. of issues published annually: 6. 3B. Annual subscription price: \$28. 4. Complete mailing address of known office of publication: P.O. Box 13975, Research Triangle Park, NC 27709-3975. 5. Complete mailing address of the headquarters of general business offices of the publisher: P.O. Box 13975, Research Triangle Park, NC 27709-3975. 6. Full names and complete mailing address of publisher and editor: Dr. John F. Ahearne, publisher, P.O. Box 13975, Research Triangle Park, NC 27709-3975; Rosalind Reid, editor, P.O. Box 13975, Research Triangle Park, NC 27709-3975. 7. Owner: Sigma Xi, The Scientific Research Society, P.O. Box 13975, Research Triangle Park, NC 27709-3975. 8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities: None. 9. The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes: Has not changed during preceding 12 months. 10. Extent and nature of circulations: A. Total no. copies: Average no. copies each issue during preceding 12 months, 108,707; actual no. copies of single issue published nearest to filing date, 119,320. B. Paid and/or requested circulation: B1. Sales through dealers and carriers, street vendors and counter sales: Average no. copies each issue during preceding 12 months, 1,762; actual no. copies of single issue published nearest to filing date, 3,468. B2. Mail subscription: Average no. copies each issue during preceding 12 months, 98,986; actual no. copies of single issue published nearest to filing date, 106,050. C. Total paid and/or requested circulation: Average no. copies each issue during preceding 12 months, 100,747; actual no. copies of single issue published nearest to filing date, 109,518. D. Free distribution by mail, carrier or other means, samples, complimentary, and other free copies: Average no. copies each issue during preceding 12 months, 1,128; actual no. copies of single issue published nearest to filing date, 963. E. Total distribution: Average no. copies each issue during preceding 12 months, 101,875; actual no. copies of single issue published nearest to filing date, 110,481. F. Copies not distributed: F1. Office use, left over, unaccounted, spoiled after printing: Average no. copies each issue during preceding 12 months, 5,056; actual no. copies of single issue published nearest to filing date, 6,951. F2. Return from news agents: Average no. copies each issue during preceding 12 months, 1,776; actual no. copies of single issue published nearest to filing date, 1,888. G. Total: average no. copies each issue during preceding 12 months, 108,707; actual no. copies of single issue published nearest to filing date, 119,320.



American Scientist Annual Index, Volume 81, 1993

Articles

Ahearne, John F., *The Future of Nuclear Power*, Jan., 24

Amábile-Cuevas, Carlos F., and Marina E. Chicurel, *Horizontal Gene Transfer*, Jul., 332

Alaya, Francisco J., and Bert Black, *Science and the Courts*, May, 230

Ayres, Robert U., and Duane C. Butcher, *The Flexible Factory Revisited*, Sept., 448

Ball, Donald M., Jeffrey F. Pedersen and Garry D. Lacefield, *The Tall-Fescue Endophyte*, Jul., 370

Brams, Steven J., *Theory of Moves*, Nov., 562

Burney, David A., *Recent Animal Extinctions: Recipes for Disaster*, Nov., 530

Chung, Fan, and Shlomo Sternberg, *Mathematics and the Buckyball*, Jan., 56

Cronk, Lee, *Parental Favoritism toward Daughters*, May, 272

Davis, Robert E., and Robert Dolan, *Nor'easters*, Sept., 428

Fleming, Theodore H., *Plant-Visiting Bats*, Sept., 460

Gauch, Hugh G., *Prediction, Parsimony and Noise*, Sept., 468

Guengerich, F. Peter, *Cytochrome P450 Enzymes*, Sept., 440

Herbst, Jan F., *Permanent Magnets*, May, 252

Josephson, Paul R., *The Crisis in Russian Physics*, Nov., 571

Kleinschmidt, Traute, and Thomas Gorr, *Evolutionary Relationships of the Coelacanth*, Jan., 72

Kniffen, Donald A., *The Gamma-Ray Universe*, Jul., 342

Larson, Douglas W., *The Recovery of Spirit Lake*, Mar., 166

MacPhee, Donald G., *Directed Evolution Reconsidered*, Nov., 554

Murr, Lawrence E., and William H. Kinard, *Effects of Low Earth Orbit*, Mar., 152

Myers, Judith H., *Population Outbreaks in Forest Lepidoptera*, May, 240

Nicol, Stephen, and William de la Mare, *Ecosystem Management and the Antarctic Krill*, Jan., 36

Pashler, Hal, *Doing Two Things at the Same Time*, Jan., 48

Pringle, Catherine, George Vellidis, Francis Heliotis, Dan Bandacu and Sergiu Cristofor, *Environmental Problems of the Danube Delta*, Jul., 350

Richardson, Philip L., *Tracking Ocean Eddies*, May, 261

Sigmon, Becky A., *Physical Anthropology in Socialist Europe*, Mar., 130

Swazey, Judith P., Melissa S. Anderson and Karen Seashore Lewis, *Ethical Problems in Academic Research*, Nov., 542

Wayne, Randy, *Excitability in Plant Cells*, Mar., 140

Zweibel, Ken, *Thin-Film Photovoltaic Cells*, Jul., 362

Departments

Computing Science: Hayes, Brian, *Balanced on a Pencil Point*, Nov., 510

Engineering: Petroski, Henry, *Engineers as Writers*, Sept., 419

Engineering: Petroski, Henry, *The Ferris Wheel*, May, 216

Engineering: Petroski, Henry, *Hoover Dam*, Nov., 517

Engineering: Petroski, Henry, *On Dating Inventions*, Jul., 314

Engineering: Petroski, Henry, *The Panama Canal*, Jan., 13

Engineering: Petroski, Henry, *Predicting Disaster*, Mar., 110

Marginalia: Fernie, J. Donald, *The Great Moon Hoax*, Mar., 120

Marginalia: Fernie, J. Donald, *The Tunguska Event*, Sept., 412

Marginalia: Hoffmann, Roald, *For the First Time You Can See Atoms*, Jan., 11

Marginalia: Hoffmann, Roald, *Of What Use Enediyne?*, Jul., 324

Marginalia: Thomson, Keith S., *Bird-Watchers Watched*, May, 222

Marginalia: Thomson, Keith S., *Northern Exposures*, Nov., 522

The Science of Computing: Denning, Dorothy E., *The Clipper Encryption System*, Jul., 319

The Science of Computing: Denning, Peter J., *Computational Grids*, May 212

The Science of Computing: Denning, Peter J., *An End and a Beginning*, Sept., 416

The Science of Computing: Denning, Peter J., *RISC Architecture*, Jan., 7

The Science of Computing: Hayes, Brian, *The Wheel of Fortune*, Mar., 114

Sigma Xi, The Scientific Research Society
National Lecturers 1994-95, Nov., 603

Statement of Ownership

Statement of ownership, management and circulation (required by 39 U.S.C. 3685). 1A. Title of Publication: American Scientist. 1B. Publication number: 0023-240. 2. Date of filing: September 30, 1993. 3. Frequency of issue: Bimonthly. 3A. No. of issues published annually: 6. 3B. Annual subscription price: \$28. 4. Complete mailing address of known office of publication: P.O. Box 13975, Research Triangle Park, NC 27709-3975. 5. Complete mailing address of the headquarters of general business offices of the publisher: P.O. Box 13975, Research Triangle Park, NC 27709-3975. 6. Full names and complete mailing address of publisher and editor: Dr. John F. Ahearne, publisher, P.O. Box 13975, Research Triangle Park, NC 27709-3975; Rosalind Reid, editor, P.O. Box 13975, Research Triangle Park, NC 27709-3975. 7. Owner: Sigma Xi, The Scientific Research Society, P.O. Box 13975, Research Triangle Park, NC 27709-3975. 8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities: None. 9. The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes: Has not changed during preceding 12 months. 10. Extent and nature of circulations: A. Total no. copies: Average no. copies each issue during preceding 12 months, 108,707; actual no. copies of single issue published nearest to filing date, 119,320. B. Paid and/or requested circulation: B1. Sales through dealers and carriers, street vendors and counter sales: Average no. copies each issue during preceding 12 months, 1,762; actual no. copies of single issue published nearest to filing date, 3,468. B2. Mail subscription: Average no. copies each issue during preceding 12 months, 98,986; actual no. copies of single issue published nearest to filing date, 106,050. C. Total paid and/or requested circulation: Average no. copies each issue during preceding 12 months, 100,747; actual no. copies of single issue published nearest to filing date, 109,518. D. Free distribution by mail, carrier or other means, samples, complimentary, and other free copies: Average no. copies each issue during preceding 12 months, 1,128; actual no. copies of single issue published nearest to filing date, 963. E. Total distribution: Average no. copies each issue during preceding 12 months, 101,875; actual no. copies of single issue published nearest to filing date, 110,481. F. Copies not distributed: F1. Office use, left over, unaccounted, spoiled after printing: Average no. copies each issue during preceding 12 months, 5,056; actual no. copies of single issue published nearest to filing date, 6,951. F2. Return from news agents: Average no. copies each issue during preceding 12 months, 1,776; actual no. copies of single issue published nearest to filing date, 1,888. G. Total: average no. copies each issue during preceding 12 months, 108,707; actual no. copies of single issue published nearest to filing date, 119,320.





THIS PERIODICAL MIGHT BE COPYRIGHTED, IN
WHICH CASE THE CONTENTS REMAIN THE PROPERTY
OF THE COPYRIGHT OWNER. THE MICROFORM
EDITION IS REPRODUCED BY AGREEMENT WITH
THE PUBLISHER. DUPLICATION OR RESALE WITHOUT
PERMISSION IS PROHIBITED.

UNIVERSITY MICROFILMS INTERNATIONAL
ANN ARBOR, MICHIGAN

U·M·I

SOME PAGE(S) MAY NOT HAVE REPRODUCED
WELL DUE TO A LACK OF PHOTOGRAPHIC
CONTRAST BETWEEN TEXT AND BACKGROUND.